

FIG.1

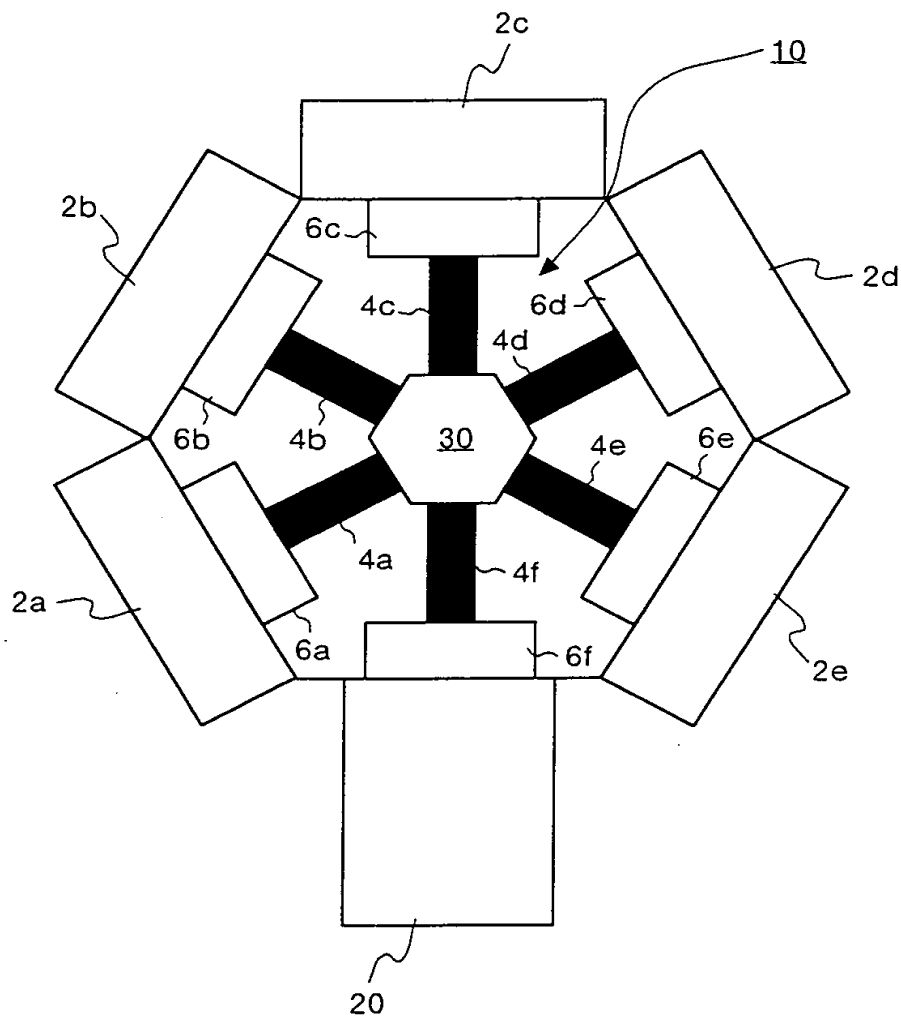
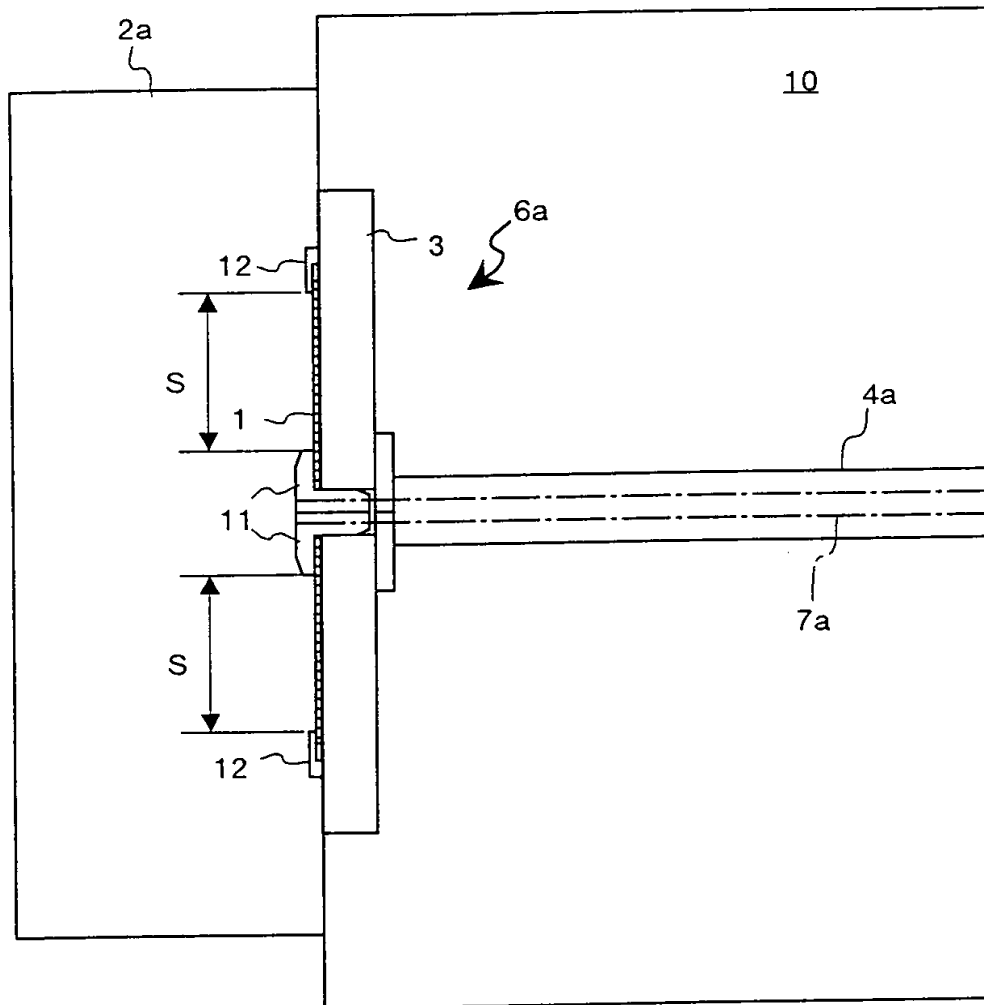


FIG.2



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FIG.3

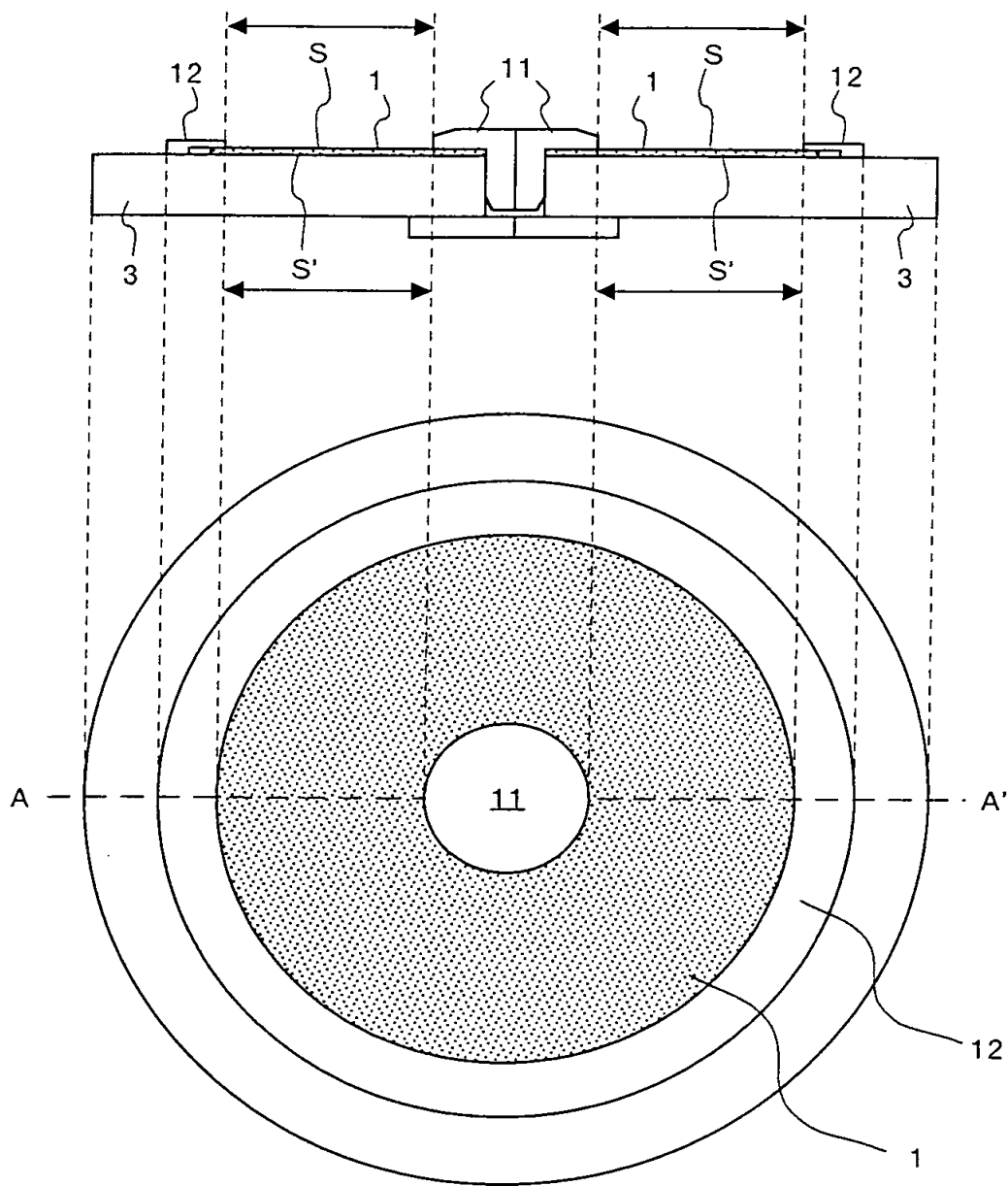
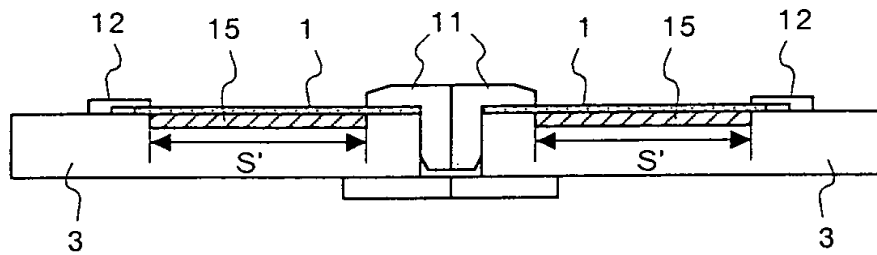
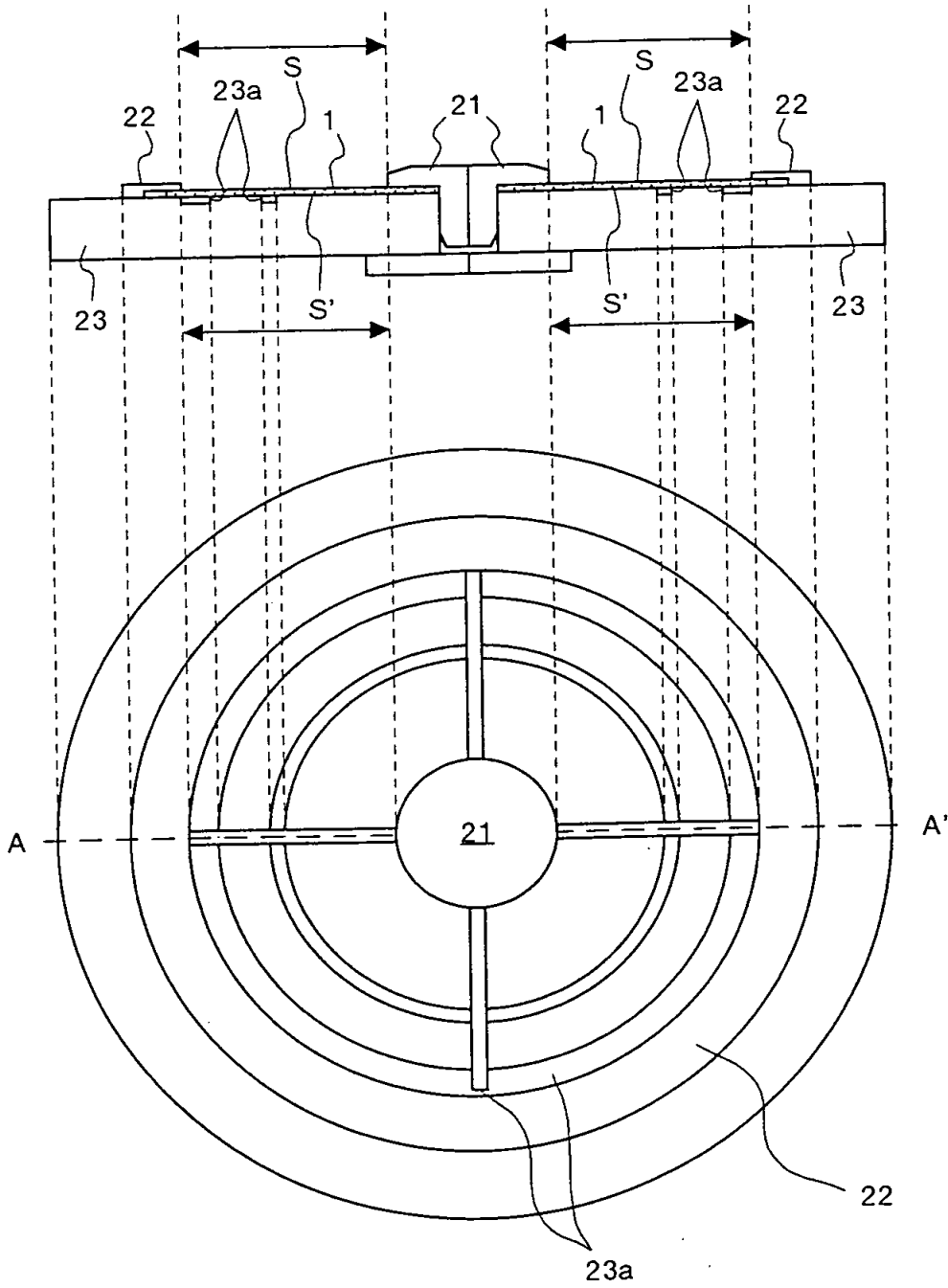


FIG. 3 is a cross-sectional and top-down view of a circular device. The top-down view shows a central circular region 11, surrounded by a shaded annular region 1, and an outer ring 12. A horizontal dashed line A-A' passes through the center. The cross-sectional view shows a central vertical structure 11, with a horizontal layer 1 above it. The layer 1 has a central opening. The outer ring 12 is shown on the left and right sides. Dimensions S and S' are indicated with arrows. S is the horizontal distance from the center to the edge of the layer 1. S' is the horizontal distance from the center to the edge of the ring 12. The bottom layer is labeled 3.

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FIG. 4





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FIG.7

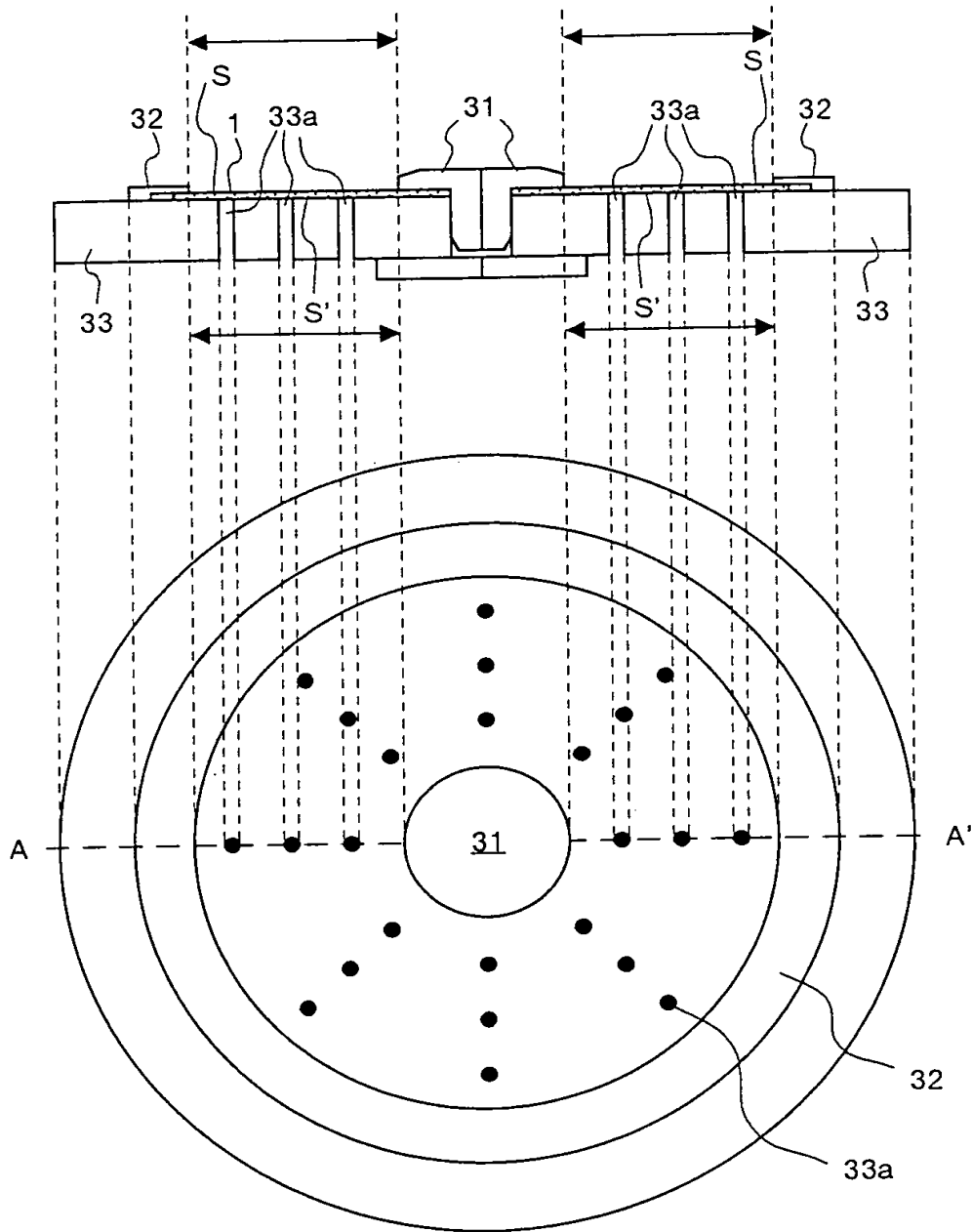


FIG.8

	THICKNESS OF SUBSTRATE			
	0.3mm	0.6mm	0.7mm	1.2mm
CONVENTIONAL MEASUREMENT TECHNOLOGY	IMPOSSIBLE			
EMBODIMENT①	-350	-300	-290	-90
EMBODIMENT②	-340	-290	-280	-85
EMBODIMENT③ ₋₁	-340	-290	-280	-85
EMBODIMENT③ ₋₂	-350	-300	-290	-90

MAXIMUM WARPING AMOUNT
 OF SUBSTRATE [μm]

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FIG.9

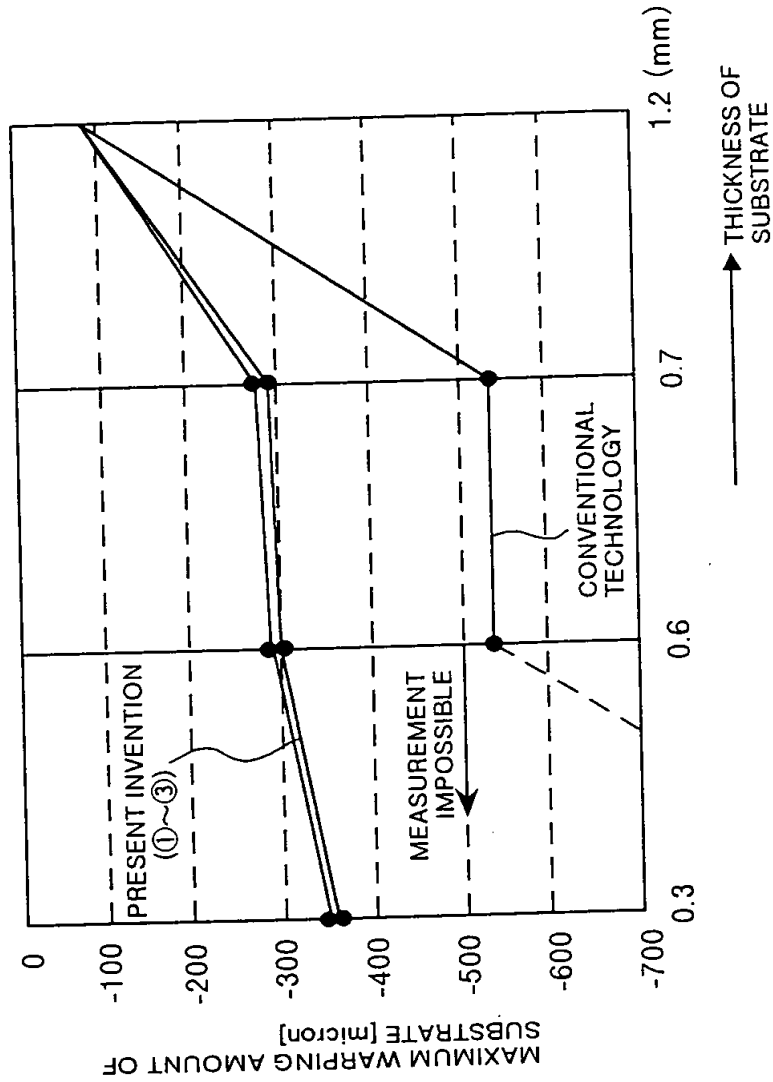
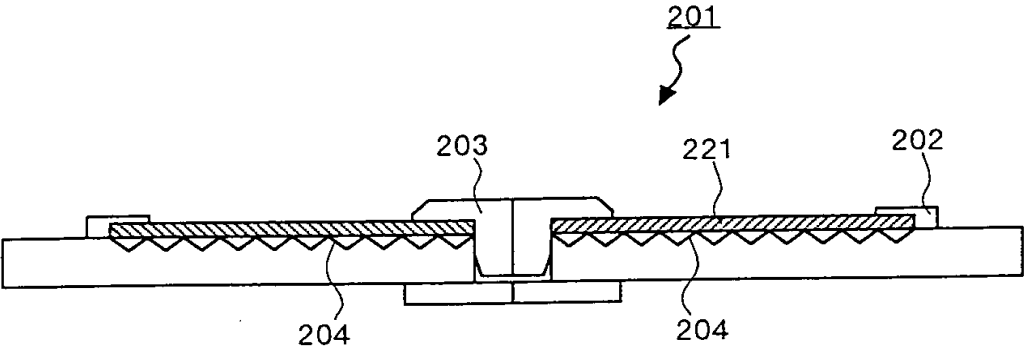
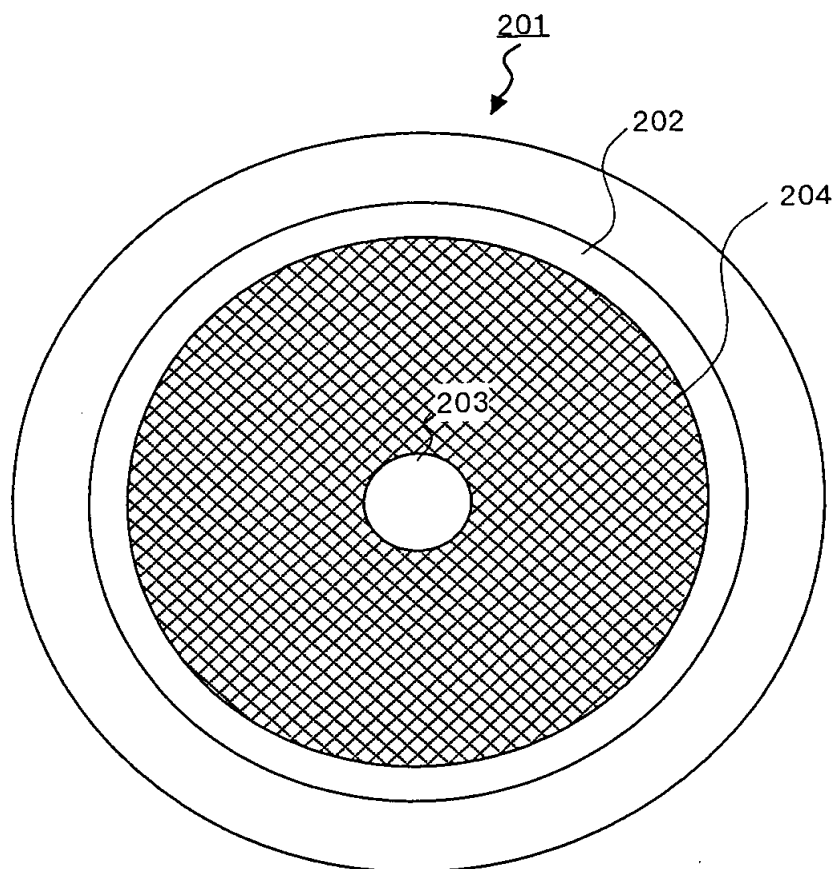


FIG.10



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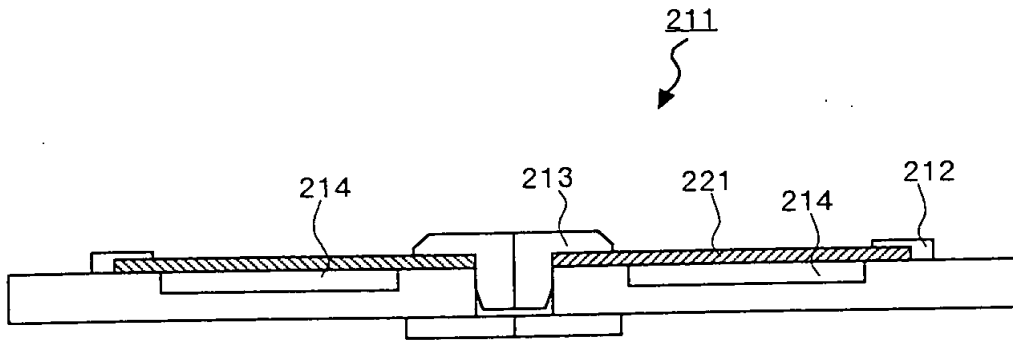
FIG.11



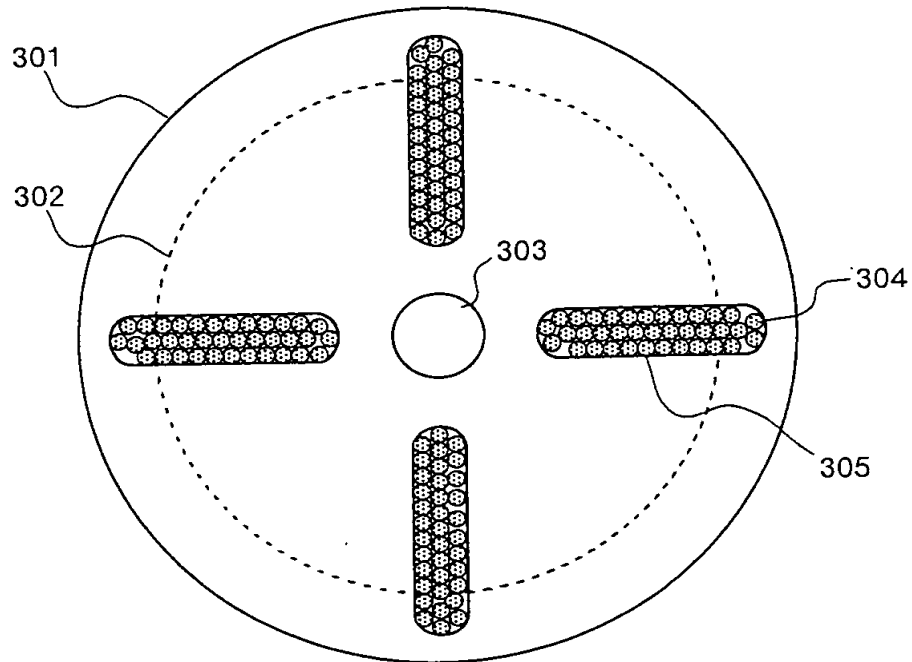
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FIG.12



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FIG.14

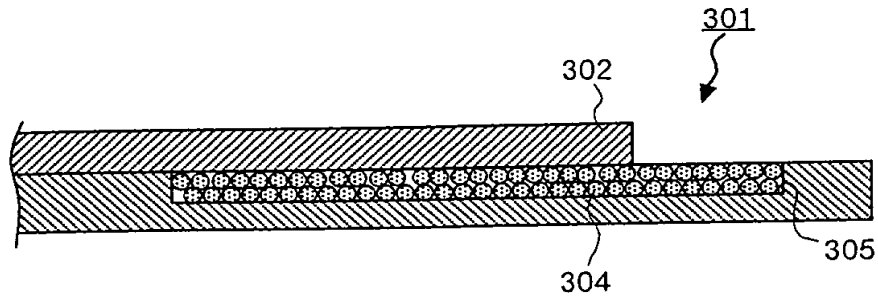
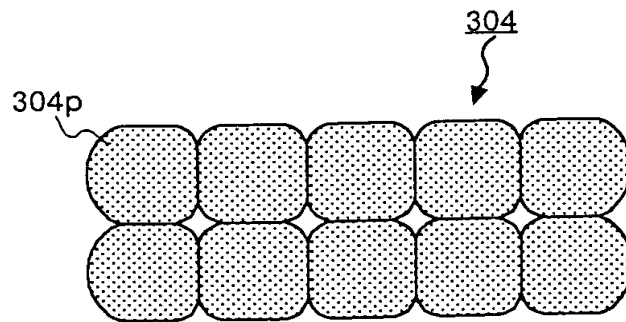


FIG.15



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FIG.16

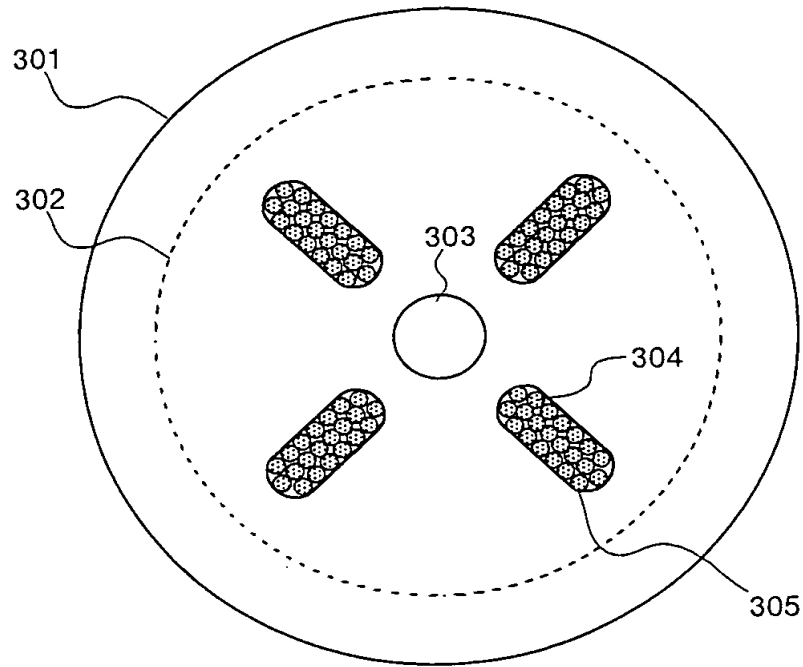
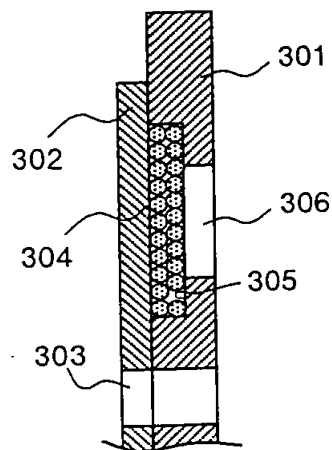


FIG.17



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FIG.18

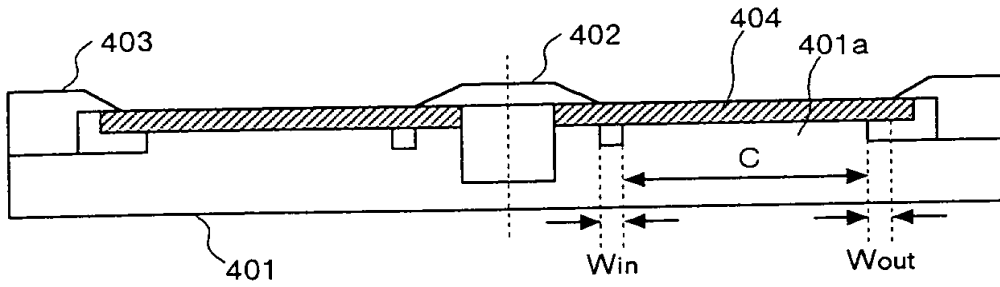
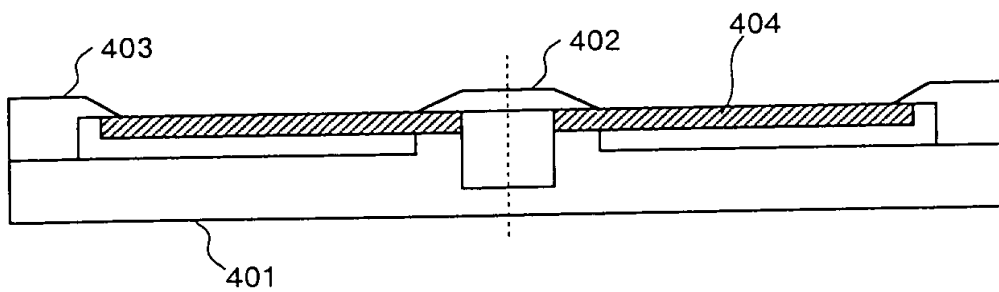
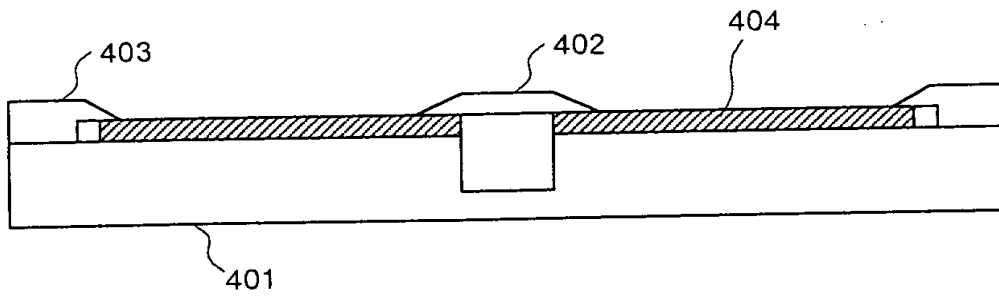


FIG.19



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FIG.20



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FIG.21

SUBSTRATE OR FILM-FORMED LAYER	MATERIAL	THICKNESS
REFLECTION LAYER	Al ALLOY	160nm
UPPER BASE PROTECTION LAYER	ZnS·SiO ₂	30nm
RECORDING LAYER	Ag-In-Sb-Te	20nm
LOWER BASE PROTECTION LAYER	ZnS·SiO ₂	180nm
SUBSTRATE	POLYCARBONATE	0.6mm

FIG.22

TYPES OF SUBSTRATE HOLDER	WARPING RATE OF SUBSTRATE (μm)
SUBSTRATE HOLDER SHOWN IN FIG.18	100
SUBSTRATE HOLDER SHOWN IN FIG.19	>400
SUBSTRATE HOLDER SHOWN IN FIG.20	100

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FIG.23

NO.	WIDTH W _{in} FROM AN INNER MASK TO A SUBSTRATE HOLDER EDGE (mm)	WIDTH W _{out} FROM AN INNER MASK TO A SUBSTRATE HOLDER EDGE (mm)	WARPING AMOUNT OF THE SUBSTRATE (μ m)	A NUMBER OF UNSUCCESSFULLY LOADED SUBSTRATES AMONG 100 SHEETS CONTINUOUSLY FORMED
1	4	1	100	0
2	4	0	100	20
3	4	0.5	100	0
4	4	3	100	0
5	4	5	100	0
6	4	6	150	0
7	4	7	200	0
8	1	1	100	20
9	2	1	100	0
10	5	1	100	0
11	7	1	100	0
12	10	1	100	0
13	11	1	120	0
14	12	1	150	0

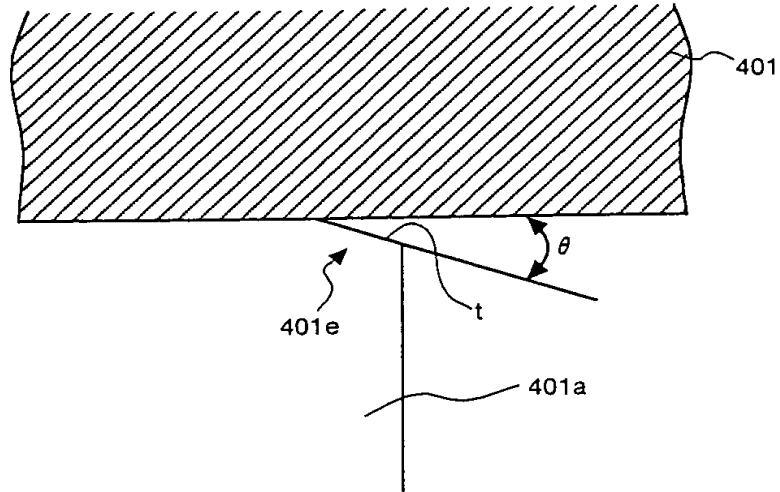
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FIG.24

NO.	TAPER ANGLE θ IN SUBSTRATE HOLDER EDGE (deg.)	WARPING AMOUNT OF THE SUBSTRATE (μm)	PRESENCE OF A DAMAGE ON A SUBSTRATE CAUSED BY SUBSTRATE HOLDER EDGE SECTION
15	0	100	YES
16	0.5	100	YES
17	1.0	100	NO
18	1.5	100	NO
19	2.0	100	NO
20	2.5	150	NO
21	3.0	200	NO

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FIG. 25

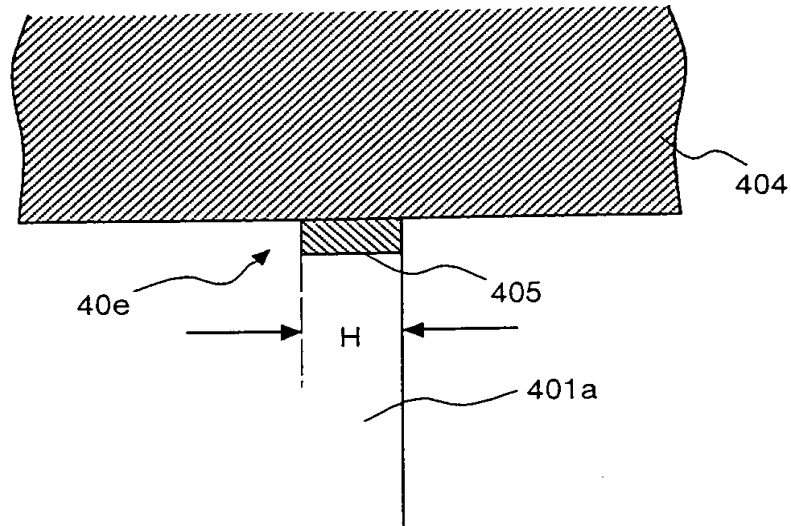


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FIG.26

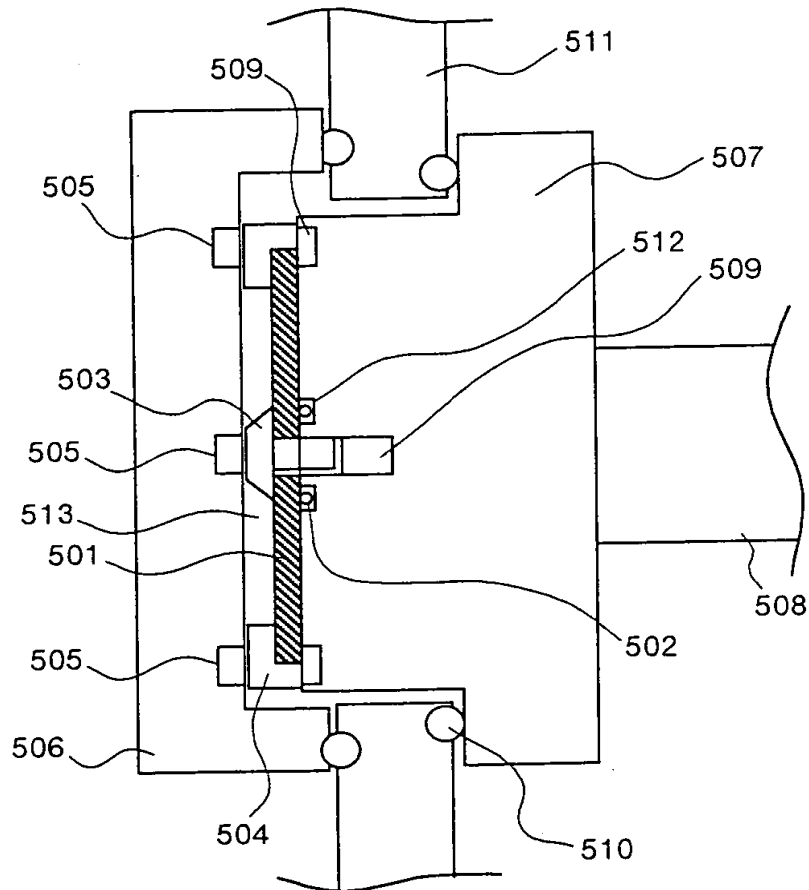
NO.	WIDTH H OF SILICON RUBBER IN SUBSTRATE HOLDER EDGE (mm)	WARPING RATE OF A SUBSTRATE (μ m)	PRESENCE OF A DAMAGE ON A SUBSTRATE CAUSED BY SUBSTRATE HOLDER EDGE SECTION
22	0	100	YES
23	0.1	100	NO
24	0.3	100	NO
25	0.5	100	NO
26	0.6	120	NO
27	0.7	150	NO

FIG.27



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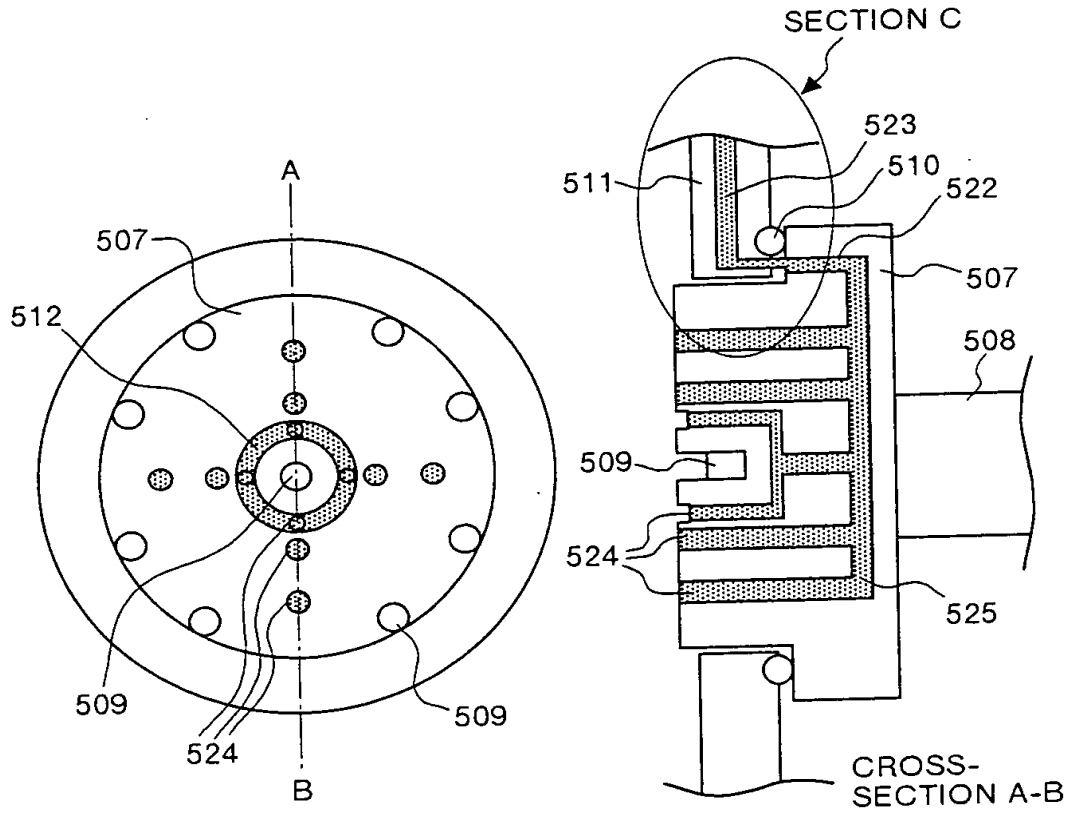
FIG. 28



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FIG.29



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FIG.30

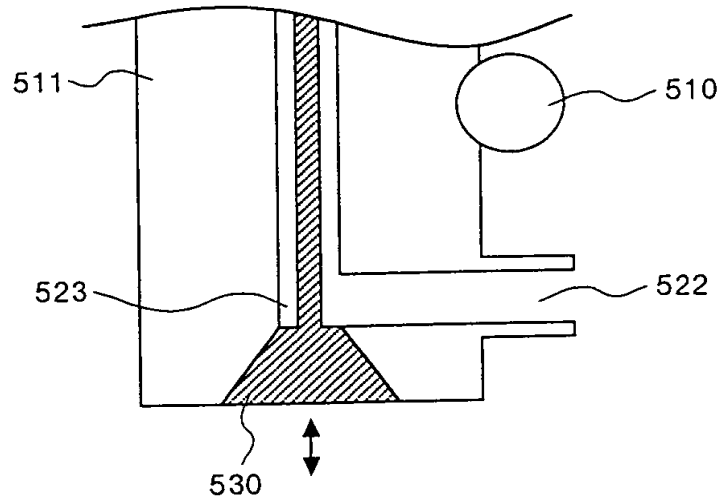


FIG. 31

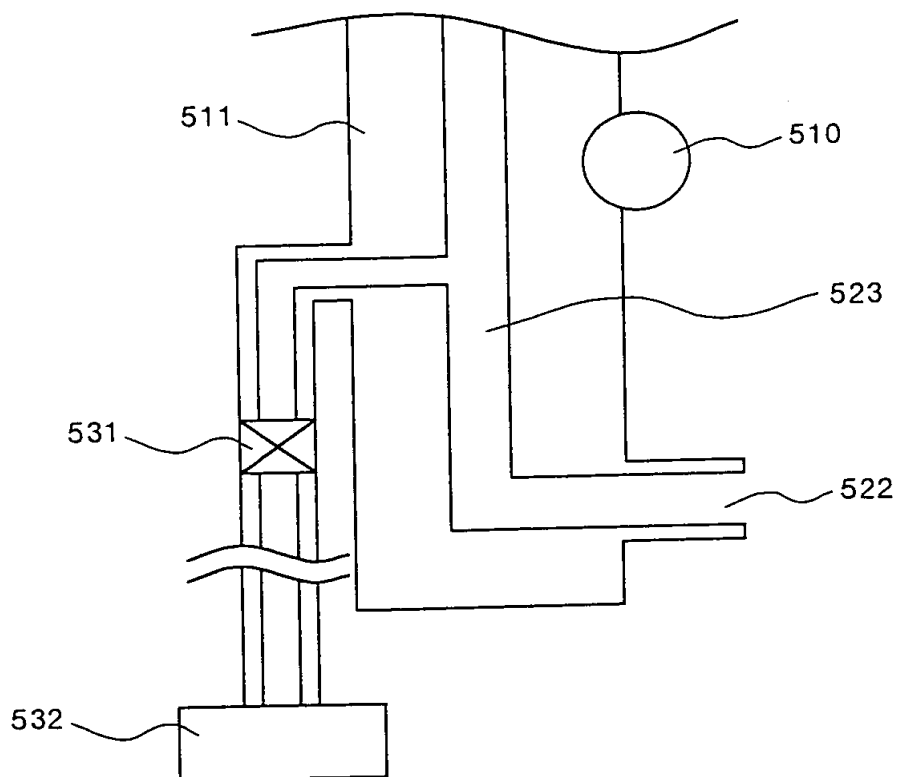


FIG.32

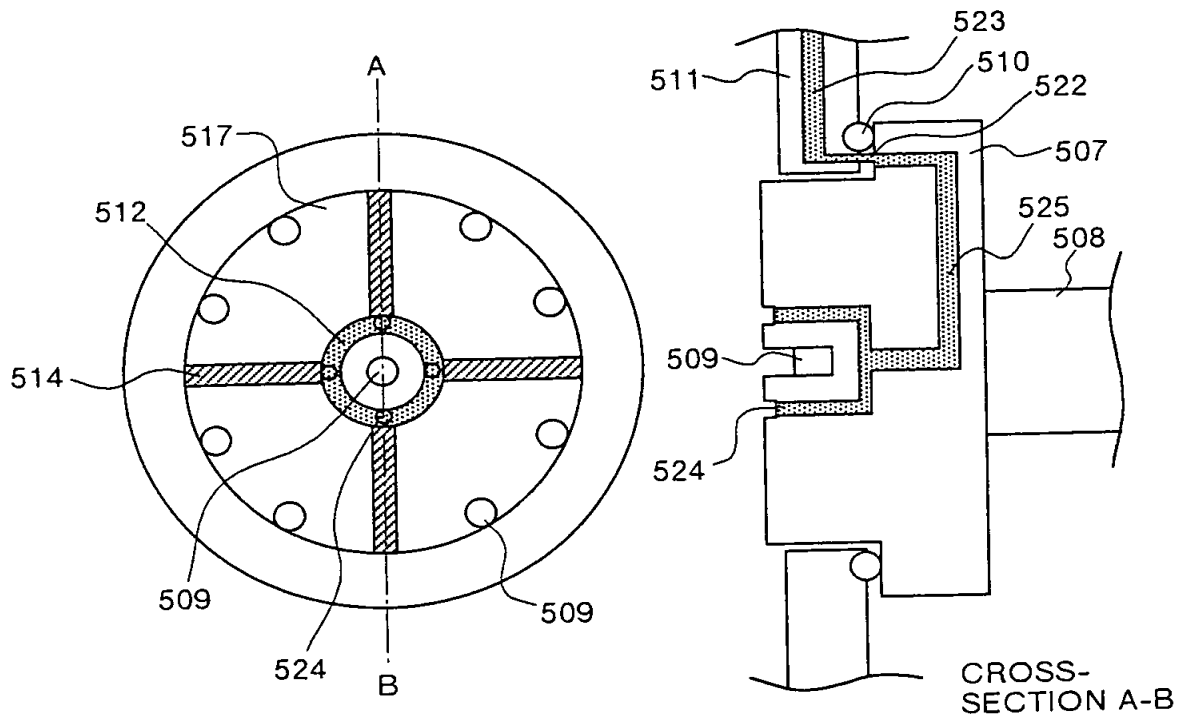
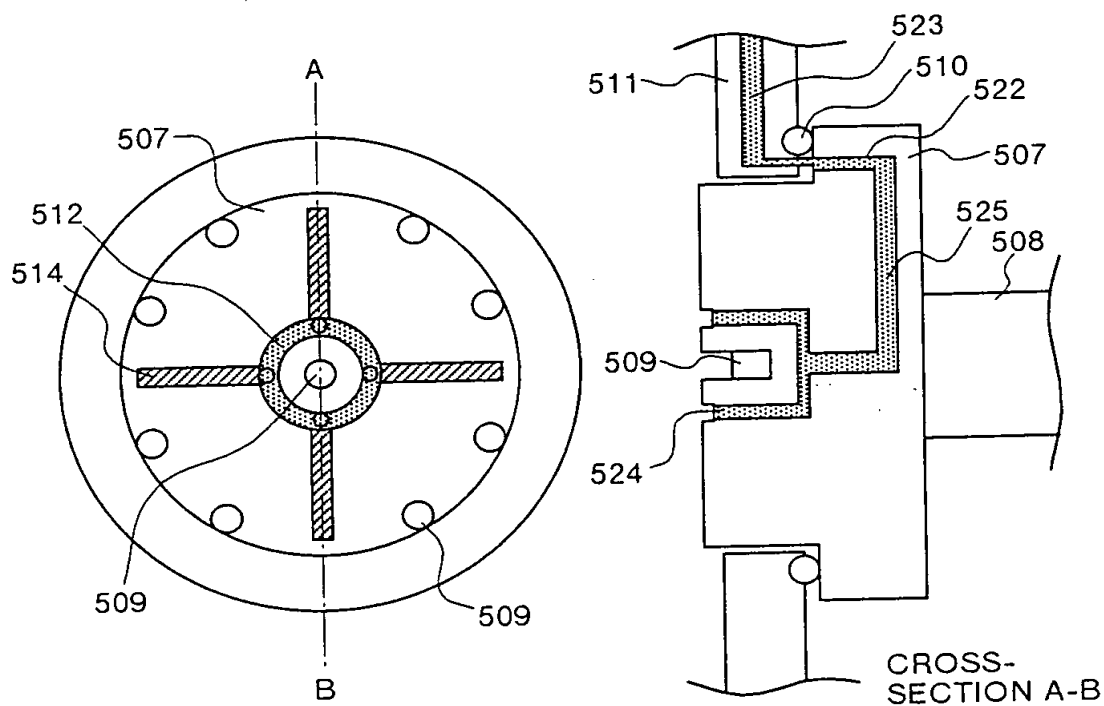


FIG.33



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FIG. 34

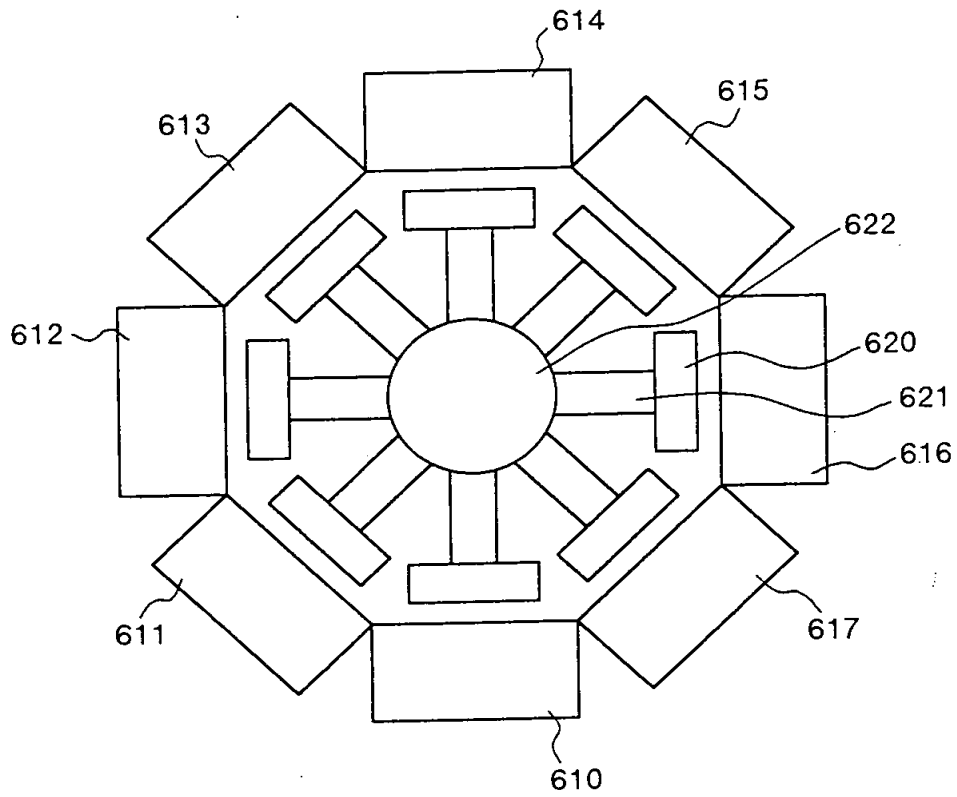
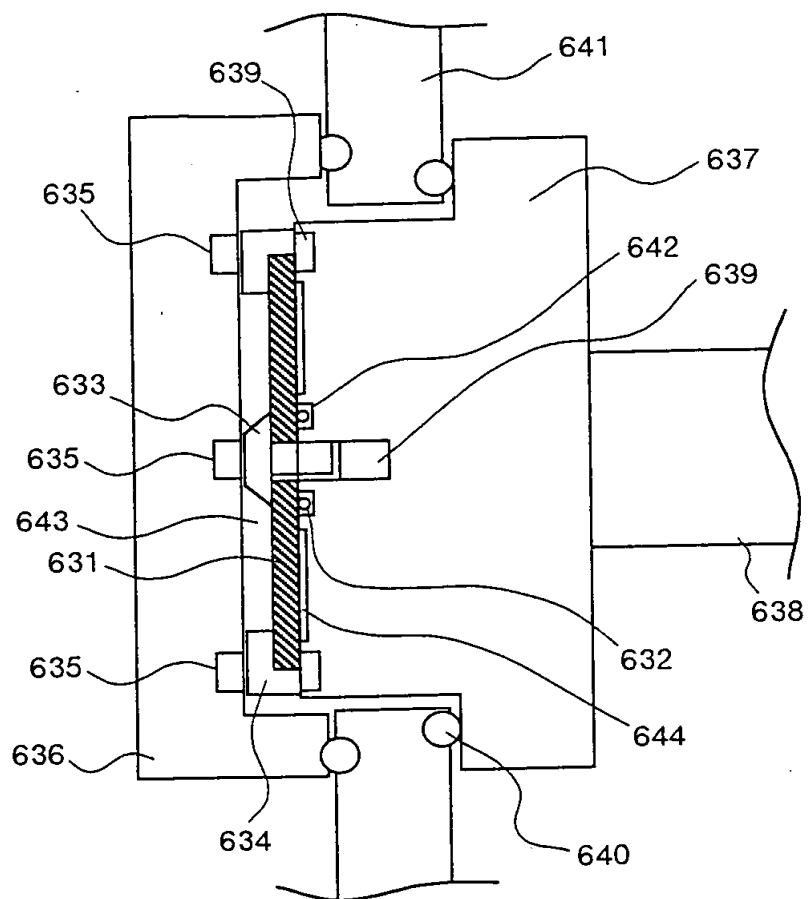


FIG. 35



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FIG.36

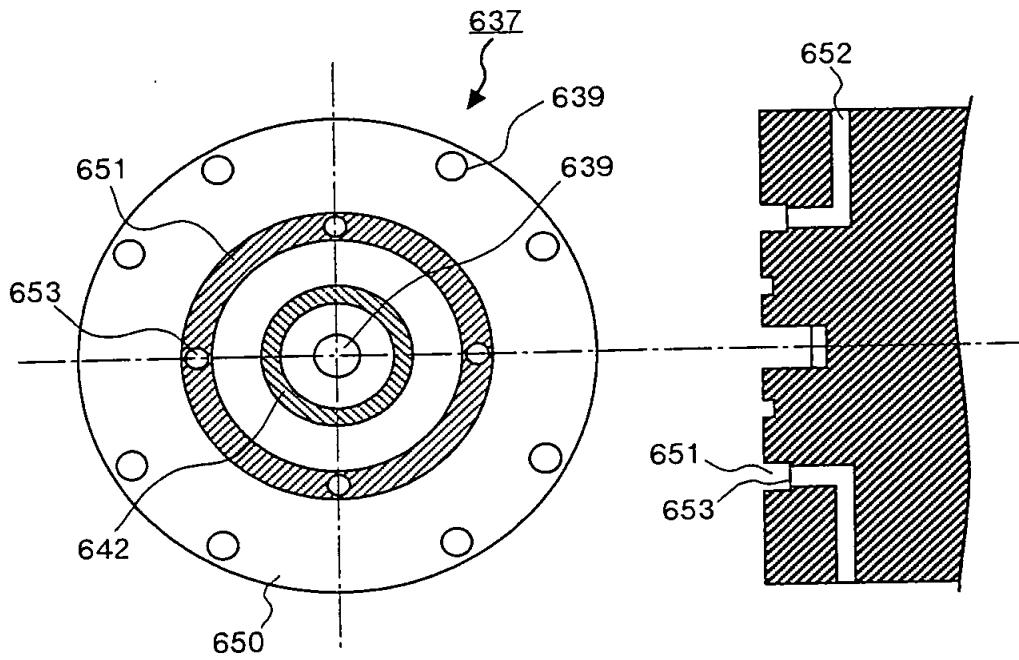
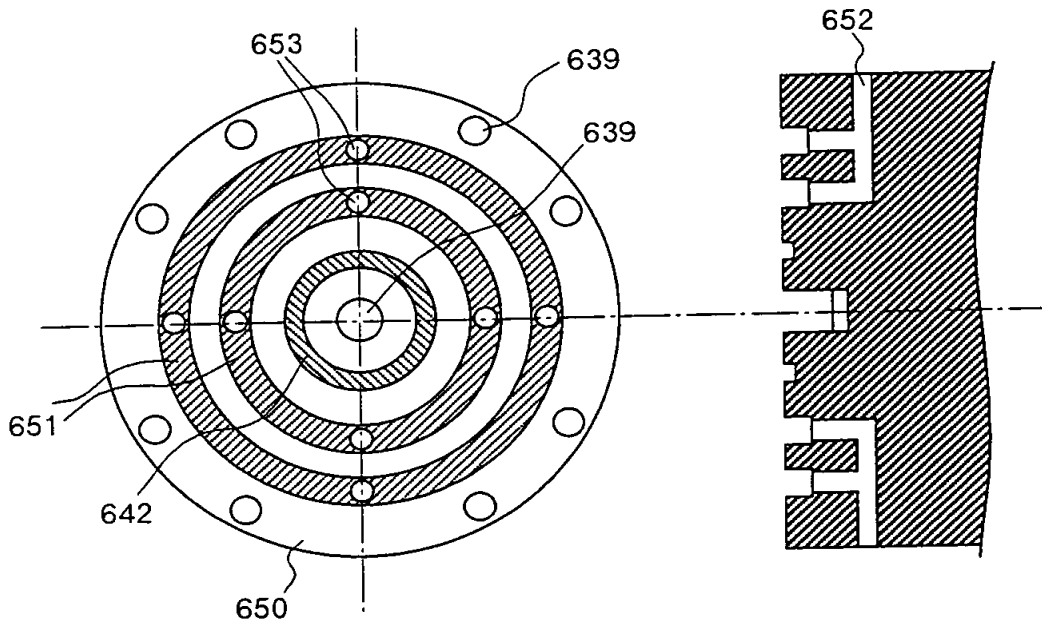
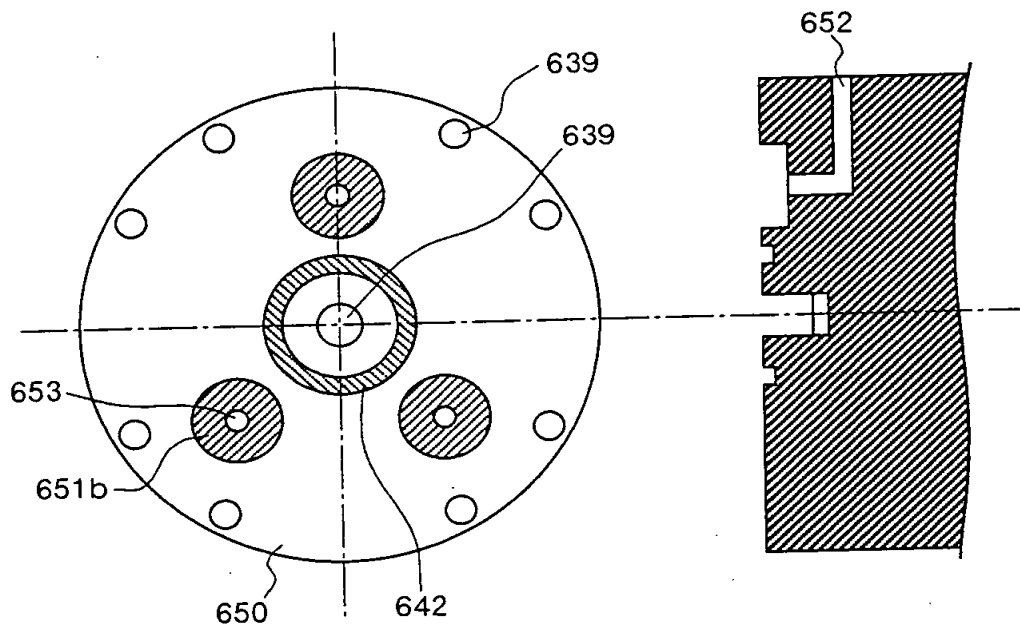


FIG.37



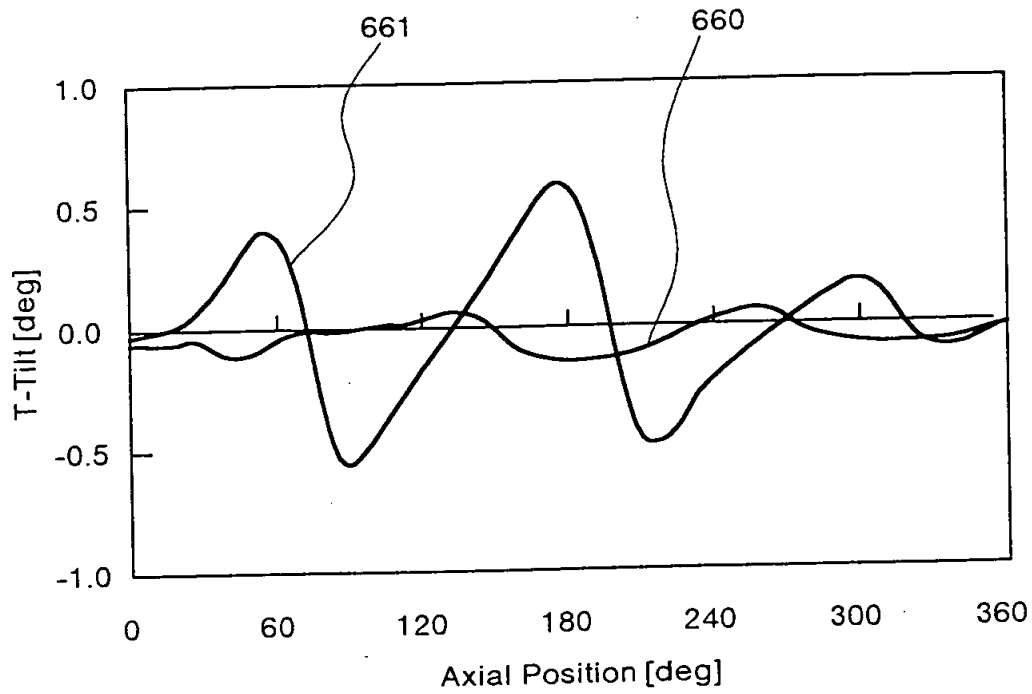
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FIG.38



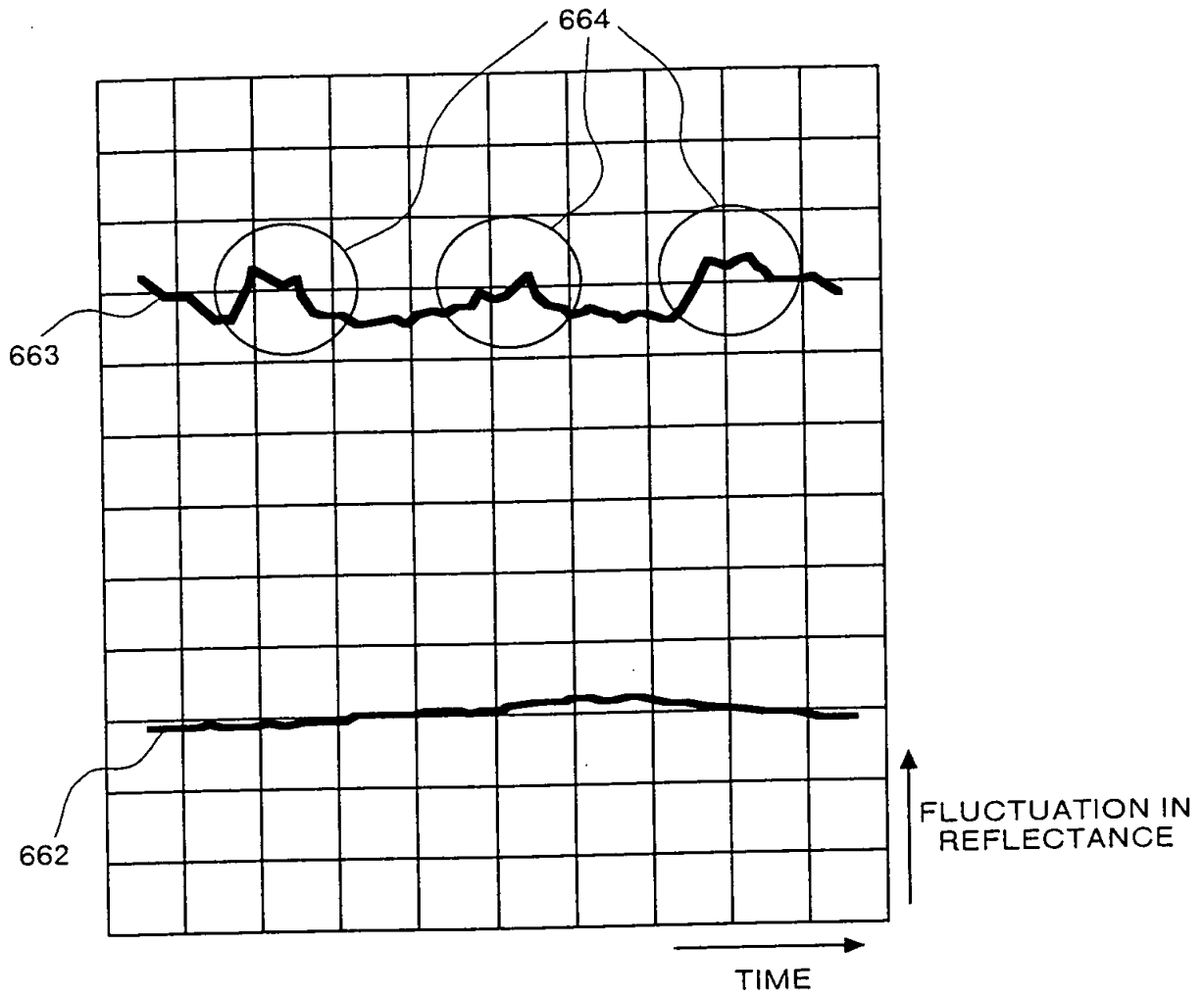
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FIG.39



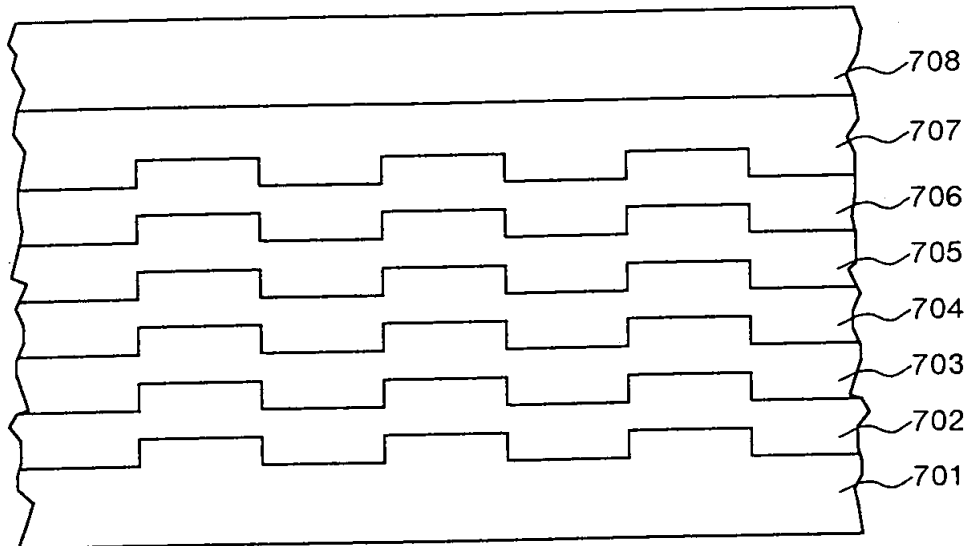
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FIG. 40



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FIG. 41



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FIG.42

